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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR          | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-------------------------------|---------------------|------------------|
| 09/896,071  | 06/29/2001  | Debashis Bhattacharya         | 162.7106USU         | 9529             |
| 7590 03/04/2004   |             |                               |                     |                  |
| Paul D. Greeley, Esq.<br>Ohlandt, Greeley, Ruggiero & Perle, L.L.P.<br>One Landmark Square, 10th Floor<br>Stamford, CT 06901-2682 |             | EXAMINER<br>DO, THUAN V       |                     |                  |
|   |             | ART UNIT PAPER NUMBER<br>2825 |                     |                  |

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/896,071

Applicant(s)

BHATTACHARYA ET AL.

Examiner

Thuan Do

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 10-14, 17, 20-24, 27 and 30-34 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 9, 15, 16, 18, 19, 25, 26, 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This final-office action is responsive to the amendment entered on 11/24/03.

Claims 1-34 are pending in this office action.

Thank Mr. Calhoun for talking on 2/4/04 about the faxed oath document to the Patent office in the effort of allowance possibility. Unfortunately a new search found the prior art of Chang matching the new adding feature and the new ground is as following.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 103 that form the basis for the rejections under this section made in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,7,10-14,17,20-24,27,30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al., Pat. No. 5,617,328 in view of Chang et al. Pat. No. 6,415,426.

#### **Regarding claim 1:**

Tsai teaches a method comprising:

receiving a design specification for said design-specific cell (col. 3, lines 24-36 where specification of cells are defined by a processor);

mapping to a transistor -level representation of said design-specific cell (col. 3, lines 11-22 ), said mapping based on said design specification (col. 3, lines 24-36 and col. 7, lines 37-50); and

evaluating said transistor -level representation of said design-specific cell for meeting said design specification (col. 7, lines 37-50).

**Chang** teaches:

Electrical behavior or transistor level characteristics (col. 1, lines 44-58 and col. 7, lines 38-62 where timing characteristics of cell are used).

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It would have been obvious to one of ordinary skill in the integrated circuit design art at the time of the invention to have combined the teaching of **Chang** into Tsai to have electrical behavior or transistor level characteristics as taught by **Chang** would have provided electrical characteristics for accuracy in evaluating a circuit design .

**Regarding claim 2:** Tsai teaches a method with design context (col. 2, lines 31-53 where a context of a circuit design is implemented).

**Regarding claim 4:** Tsai teaches a method with a netlist (figure 3c) and a standard-cell representation (col. 2, lines 31-53 ).

**Regarding claims 3,7,10:** These claims teach a method similar to claim 1 and rejected in a similar manner.

**Regarding claim 11:**

Tsai teaches a system comprising:

an interface (col. 4, lines 41-64 with box 170) for receiving a design specification for said design-specific cell (col. 3, lines 24-36 );

means for evaluating said transistor -level representation of said design-specific cell for determining whether said transistor-level representation of said IC meets said design specification (col. 4, lines 41-64).

means for mapping a transistor -level representation of said design-specific cell, wherein said means for mapping uses said design -specific specification as a basis for the mapping (col. 3, lines 11-36 and col. 7, lines 37-50);

**Chang** teaches:

Electrical behavior or transistor level characteristics (col. 1, lines 44-58 and col. 7, lines 38-62 where timing characteristics of cell are used).

The motivation of **Chang** into Tsai is the same as described in claim 1.

**Regarding claims 12-14,17,20:** These claims teach a method similar to claim 11 and rejected in a similar manner.

**Regarding claim 21:** This claim teaches a design process for the same system of claim 1 and rejected in the same rationale.

**Regarding claims 22-24,27,32,33:** These claims teach a method similar to claim 21 and rejected in a similar manner.

**Regarding claims 30,31,34:** These claims teach a program for the same system of claim 1 and rejected in a similar manner.

***Allowable Subject Matter***

3. Claims 5,6,8,9,15,16,18,19,25,26,28,29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reason for allowance is the prior art does not teach all limitations specified in each dependent claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

4. Applicant's arguments have been considered but are not persuaded according to the following issues:

Applicant said that the prior art does not the added feature of electrical behavior or transistor level characteristics of the design specification.

**Chang** teaches timing characteristics of the cell have been used in design specification in col. 7, lines 38-60 that meets the limitation of claimed features. Therefore, the rejection is remained as a final office action.

**THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


#### CONTACT INFORMATION

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Do whose telephone number is 571-272-1891. The examiner can normally be reached on Monday-Friday 8:30-5:30 (except 2nd Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3431 for regular communications and 703-305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0596.

Thuan Do  
Patent examiner  
2/10/04

  
VUTHE SIEK  
PRIMARY EXAMINER